

08 JAN 91

THURSDAY 20 JULY

1200-1300

PLENARY LECTURE Brighton Centre

Chairman: J W Bridges (Guildford, UK)

Reactive intermediates and interactions with biological systems

D. Munsuy (Paris, France)

1300-1430

LUNCH Brighton Centre

1430-1730

SYMPOSIUM 9 Brighton Centre

Mechanisms of action and clinical efficacy of antidotes

Joint Symposium with the International Programme for
Chemical Safety (IPCS) and the World Federation of
Clinical Toxicology Centres and Poison Control Centres

Chairmen: M J Mercier (Geneva, Switzerland) and G N Vouros (London, UK)

Abstract

1430-1500 437

Mechanisms of action and clinical efficacy of antidotes

M J Mercier & J A Haines (Geneva, Switzerland)

1500-1530 438

The evaluation of antidotes

J R Edwards (Dunedin, New Zealand)

1530-1600 439

The mechanism of action and value of antidotes to paracetamol

L F Prescott (Edinburgh, UK)

1600-1630 440

New chelating agents

F H Kemper (Münster, FRG)

1630-1700 441

Antidotes for organophosphorus poisoning - experience in developing

countries

A F Rahde (Porto Alegre, Brazil)

1700-1730 442

Antidotes for cyanide poisoning

A N P van Heijst (Bosch en Duin, The Netherlands)

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1430-1600

POSTER PRESENTATIONS Brighton Centre
Numbers in parentheses indicate poster boards

1600-1730

POSTER DISCUSSION GROUPS
Brighton Metropole and Grand Hotels

REPRODUCTIVE AND DEVELOPMENTAL TOXICOLOGY (Abstracts 443-474A)

Chairmen: P M D Foster (Macclesfield, UK) and B P Schmid (Nyon, Switzerland)

Posters will be displayed in the **Major Foyer**. The Discussion Group will be held in the **Balmoral Room, Metropole Hotel**

Abstract

- 443 (P1) Comparison of the effects of mono-(2-ethylhexyl)phthalate (MEHP) on hormonal responsiveness of cultured rat and hamster Sertoli cells
S C Lloyd & P M D Foster (Macclesfield, UK)
- 444 (P2) Teratogenicity of retinoic acid derivatives in rat embryos cultured during the early stages of organogenesis
B P Schmid, L Garel & P Atteson (Nyon, Switzerland)
- 445 (P3) The temporal sensitivity of chicken embryo micromass cultures to all-trans-retinoic acid
R Wiger & C Bjørge (Oslo, Norway)
- 446 (P4) The development of a protocol to screen chemicals for reproductive toxicity
J E Gray Jr, J Osby, J Ferrell & R Sigmon (Research Triangle Park, USA)
- 447 (P5) Structure activity relationships in the developmental toxicity of substituted phenols.
R J Kavlock, L Olgesby, L L Hall & M F Copeland (Research Triangle Park, USA)
- 448 (P6) Effect of lead on reproduction in perinatally exposed rats
M Blasch & K Kostial (Zagreb, Yugoslavia)
- 449 (P7) Valproic acid teratogenicity and *in vitro* lymphocyte susceptibility
J G C Oudzigt, M H Wiljeveen & D Lindhout (Rotterdam, The Netherlands)
- 450 (P8) Effects of reproductive tract glutathione (GSH) depletion and enhancement on ethyl methanesulphonate (EMS)-induced dominant lethal mutations
J Gandy, H K Bates, E A Buchler & R D Harbison (Little Rock, USA)
- 451 (P9) Expression of hydrocortisone acetate induced cleft palate in CFLP mouse foetuses obtained from singly- or gang housed dams
A M Bottomley, A J Brooker, D M John & R W James (Huntingdon, UK)
- 452 (P10) The metabolism and ovarian toxicity of 4-vinylcyclohexene (VCH)
B J Smith, D R Mattison & L G Sipes (Tucson & Jefferson, USA)

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REPRODUCTIVE AND DEVELOPMENTAL TOXICOLOGY (cont.)

Abstract

- 453 (P11) The effects of different toxic substances on excretion of purines in Japanese quail embryos cultured *in vitro*
H Kaltner, D Zicken, M Schrott & J Wittmann (Munich, FRG)
- 454 (P12) Skeletal abnormalities induced in rat foetuses by maternal massive doses of ergocalciferol
F Ariyuki, T Sakai, S Minamide, M Susami & A Okuniwa (Osaka, Japan)
- 455 (P13) Evaluation of reproductive toxicity of ortho-dichlorobenzene (ODCB) in the rat
R Nair, J Barter, H Bolte, R Schroeder & C Stack (St Louis, Pittsburgh, East Millstone & Washington, USA)
- 456 (P14) Urinary creatine profiles after administration of cell-specific testicular toxins to the rat
N P Moore, D M Creasy, T J B Gray & J A Timbrell (London, Eye & Carshalton, UK)
- 457 (P15) Behavioural changes in offspring of rats exposed to diazepam during gestation
R Fagiano, A A De Salvia, M Persichella, E Tortella & V Cuomo (Bari, Italy)
- 458 (P16) Dominant lethal and teratologic effects of polycyclic aromatic hydrocarbons
B D Mahfouz, T J Mast & D L Springer (Richland, USA)
- 459 (P17) Sodium tauroyl sarcosinate, an irritating agent in topical vaginal formulation
Y B Yuan, J K Schenner & A M Cooper (Kalamazoo, USA)
- 460 (P18) Stimulation of chondrogenesis of rat limb bud cells by cyanoviridin RR (microcystin-RR), a toxin from the blue green alga *Microcystis viridis*
J Yonemoto, A Kawagoe, K Kaya & M M Watanabe (Tsukuba, Japan)
- 461 (P19) Reversal of bipropionate or tilorone developmental toxicity with progestogens
T A Marks, D L Black, R D Terry, D G Bransletter & K J Kirton (Kalamazoo, USA)
- 462 (P20) Possible involvement of foetal hypoxaemia in furosemide-induced wavy ribs in rat foetuses
T Nakatsuka, T Asami, T Fujii & T Sakaguchi (Saitama, Japan)
- 463 (P21) Pesticide-induced atresia in the ovaries of a fish, *Cilus latil*
A Subramanian & P R Karpagamangapathy (New Delhi & Annamalai Nagar, India)
- 464 (P22) Biochemical changes along with testicular atrophy induced by di-n-butylphthalate in rats
M Fukuhara, Y Zhou, I Ikemoto, A Tanaka & T Machida (Tokyo, Japan)
- 465 (P23) Waterhouse Friderichsen Syndrome induced by the administration of stimulant
T Nagai, M Saito, Y Miura & T Ikeda (Sagamihara-shi, Tokyo, Japan)
- 466 (P24) Inhibition of rat embryonic cell viability and differentiation by styrene oxide *in vitro*
C Gregotti & E M Faustian (Pavia, Italy & Seattle, USA)
- 467 (P25) Effect of retinoic acid on the urokinase activity of macrophages and post-implantation embryos
B Knops, D Lison, C Collette, R Lauwerys & J J Picard (Brussels, Belgium)
- 468 (P26) Corticosterone induction of cleft palate in mice dosed with ocreotide sulphate
A Kast, H Iida, Y Tsunenari & M Asakura (Ingelheim, FRG)

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REPRODUCTIVE AND DEVELOPMENTAL TOXICOLOGY (cont.)

Abstract

- 469 (P27) Behavioural and biochemical parameters in developing rats after prenatal application of methamphetamine
H Ren, E Bien, D Kästner & G Skorka (Berlin, GDR)
- 470 (P28) Potenualities of quantitative evaluation of results of experiment in applied teratology
A Torchinsky, V Kazachenko, Y Bobrinov & E Chirkova (Moscow, USSR)
- 471 (P29) Influence of age on the toxic response of rats to sulphonamides
T Gussova, N Arkajova, L Chichernina, N Surova & L Matseva (Moscow, USSR)
- 472 (P30) Antihistaminic drug influence on the antenatal development of rats
I Golovanova & T Gussova (Moscow, USSR)
- 473 (P31) Embryotoxicity of retinoids in the rat: comparison of *in vitro* and *in vivo* data
C F Steele, J A Tipton & J N Hawker (Vitry sur Seine, France; London & Welwyn Garden City, UK)
- 474 (P32) Carbonylation versus alkylation: contribution to the developmental toxicity of five nitroaromatics *in vitro*
E M Faustman, Z Kirby & D Laflamme (Seattle, USA)
- 474.A (P33) Influence of electrophilic character and glutathione depletion on dysmorphogenesis in cultured rat embryos
K L Stark, C Harris & M R Justiss (Seattle, USA)

CARDIOVASCULAR TOXICOLOGY (Abstracts 475-485)

Chairmen: B K J Leong (Kalamazoo, USA) and A Anadón (Madrid, Spain)

Posters will be displayed in the Main Foyer. The Discussion Group will be held in the Regent Room, Grand Hotel.

- 475 (P34) The combined effects of an inhalation anaesthetic and an analgesic on the electrocardiograms (ECGs) of beagle dogs
B K J Leong & D A Rup (Kalamazoo, USA)
- 476 (P35) Non-cholinergic action of an organophosphorus compound upon heart rhythm
P Kubineau, A Corbier, D Reusta & F Janes (Vert le Petit & Orsay, France)
- 477 (P36) Influence of benzene on electrocardiographic changes in acute poisoned conscious Wistar male rats
V V Bojanic, Z Z Bojanic & Z Stankovic (Nis, Yugoslavia)
- 478 (P37) Depression of contractility in cultured cardiac myocytes by carbon tetrachloride and 1,1,1-trichloroethane
M Turcsanyi, J A Krueger & M J Breitenstein (Cincinnati, USA)

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CARDIOVASCULAR TOXICOLOGY (cont)

Abstract

- 479 (P38) The effect of benzylamine oxidase on allylamine induced cytotoxicity in myocardial myocyte reaggregates (MMR)
K Kasingland, L K Earl & A D Dayan (London, UK)
- 480 (P39) Determination of arteriolotoxicity *ex vivo* after administration of toxic chemicals to laboratory animals
H Bekemeier & R Hirschelmann (Halle, GDR)
- 481 (P40) Pathologic study of gingival hyperplasia observed in dogs receiving large doses of a calcium channel blocking agent
T Usui, M Kenu, Y Nakata & R Seydeloth (Saitama, Japan & West Point, USA)
- 482 (P41) Cardiotoxic effects of menadione
J Melgar, J Bello & A Anadon (Zurich, Switzerland & Madrid, Spain)
- 483 (P42) Cardiotoxicity studies of an interaction of lead, digoxin and aminophylline
M S Krishnamoorthy & P Muhiu (Madras, India)
- 484 (P43) Antihistamine-induced thrombocytopenia in the marmoset - dose and regimen dependent effects
F W Bonner, A Patterson & C T Eason (Alnwick, UK)
- 485 (P44) Cardiovascular toxicity following the use of ateranol in combination with diuretics
O Verstapova, T Gussova & O Esyibulskaya (Moscow, USSR)

NEUROTOXICOLOGY II (Abstracts 486-504)

Chairmen: J Tuomisto (Koupio, Finland) and L Manzo (Pavia, Italy)

Posters will be displayed in the Main Foyer. The Discussion Group will be held in the Gloucester Room, Metropole Hotel

- 486 (P45) Effect of potassium cyanide toxicity on brain glutamate
G E Isach, M Patel, J L Borowitz & B K Ardell (West Lafayette, USA)
- 487 (P46) Alpha-ketoglutaric acid (A-KG) and its antagonism of toxic effects of potassium cyanide (KCN)
A Hume, M Dulancy, T Collins & J Crout (Jackson, USA)
- 488 (P47) The structure-activity relationship of keto acids to act as antidotes against the nucleophilic poisons, cyanide (CN^-) and sulphide (S^-)
A Hume, J Mozingo & M Dulancy (Jackson, USA)
- 489 (P48) Effect of allyl chloride on the ultrastructure of motor end-plates in rat
K Sun (Jinan, China)

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NEUROTOXICOLOGY II (cont)

Abstract

- 490 (P49) Ultrastructural changes of the muscle cells and the satellite cells caused by allyl chloride in rats
K Sun, L Yu & D Yang (Jinan, China)
- 491 (P50) Effect of allyl chloride on the ultrastructure of rat peripheral nerve fibres
K Sun, L Yu & D Yang (Jinan, China)
- 492 (P51) Effects of allyl chloride on the synthetical action potential and Na^+ , K^+ metabolism of nerve trunk
K Sun (Jinan, China)
- 493 (P52) Effect of allyl chloride on the nerve fibre microtubule, neurofilament and Ca^{2+} , Mg^{2+} metabolism in rats
K Sun (Jinan, China)
- 494 (P53) Effects of chronic ethanol oral intake on the central nervous system. A study on the amygdaloid complex of the rat
J Llor & A Anadon (León, Spain)
- 495 (P54) Interaction of ethanol and other drug effects on operant behaviour
J Elsner & G Zbinden (Zürich, Switzerland)
- 496 (P55) Characterisation of acute and chronic ethanol effects in the CNS of rats and mice
K Andreas & A Winter (Dresden, GDR)
- 497 (P56) TCDD is more toxic centrally than peripherally in the resistant Wistar rat
J Tuomisto, R Pohjanvirta & I Tuomisto (Kouppio, Finland)
- 498 (P57) Acute effects of ozone on EEG activity and heart rate in rats
H Arata, I Uchiyama & E Yukiyama (Kawasaki & Tokyo, Japan)
- 499 (P58) Effect of soman, atropine and HGG 12 upon the behavioural and physiologic state of the mouse
M Wentz, H Arndt & L Szinicz (Garching, FRG)
- 500 (P59) Effects of xenobiotics on the brain and metabolism of ^{14}C -derivatives in the rat brain after long term intravenous injection of [^{14}C] glucose
E Hayama & A Shigematsu (Chiba, Japan)
- 501 (P60) The effects of carbon disulphide, n-hexane, 2,5-hexanedione and 2-hexanone on cell membrane integral proteins
H Tahki, S Hypponen & M Korpela (Tampere, Finland)
- 502 (P61) A novel action of the pyrethroid insecticide deltamethrin on mammalian muscle and nerve
D E Ray & P J Forshaw (Carshalton, UK)
- 503 (P62) Neuromuscular actions of sodium selenite on chick biventer cervicis nerve-muscle preparation
S Y Lin-Shiau, S H Liu & W M Fu (Taipei, Taiwan)